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3. The principal steam power station (1) was located in an area called "Kanchintsu". It had the following equipment:

No.	Turbine Generator	Manufacturer	Boiler	Mftr.	Trans-former	Year Constr.
1	25,000 Kw	Mitsubishi (MTB)	140,000 Kg Steam/hr	B & W	27,500 KW	1933
2	25,000 Kw	Brown Boveri	140,000 Kg " "	MTB	27,500 KW	1934
3	25,000 Kw	" "	140,000 Kg " "	MTB	27,500 KW	1934
4	4000 Kw x 2	" "	140,000 Kg " "	B & W		1936

No.4 provided power for operation of the power house. Soviet soldiers removed all units except for No.4 in late 1945. The equipment was all in poor condition.

4. The secondary steam power station, (2) above, was located in a district called "Amanokawa". It has the following equipment:

No.	Turbine Generator	Manufacturer	Manufactured
1	12,500 Kw	Mitsubishi	1920
2	15,000 Kw	"	1930
3	15,000 Kw	"	1935

All of the equipment was in fair condition.

5. ANSHAN (41°07'N - 122°57'E)

The installation at Anshan was a substation located about six kilometers south of the railroad station and about two kilometers east of the railroad station.

6. SUP 'UNG RESERVOIR (40°30'N - 125°05'E)

At Sup 'Ung Reservoir, a dam was constructed across the Yalu River and hydro generators were installed during the period 1938-1942. There were six generators, three Westinghouse and three Hitachi, each with about 100,000 Kw capacity. The power house supplied 50 cycle current to Manchuria and 60 cycle current to Korea. There was an arrangement whereby small amounts of 50 cycle current went to Korea and 60 cycle current went to Manchuria. In 1945, Soviet troops removed two of the generators supplying 50 cycle current to Manchuria. Another of the generators was seriously damaged but the three remaining generators were all in good condition.

7. CHIN DUITSU (Approximately 41°40'N - 122°E)

At Chin DuitSU, near Talar, a substation only was located.

8. FOU HSIN (42°06'N - 121°42'E)

The steam power plant at Fou Hsin was located at the southwest corner of the juncture of the railroad line and the main road going south. Enclosure B is a sketch of the layout of this power plant. The equipment installed was;--

No.	Turbine Generators	Manufacturer	Year
1	27,000 Kw	Siemens	1937
2	27,000 Kw	"	1937
3	53,000 Kw	"	1939
4	53,000 Kw	"	1942
5	53,000 Kw	"	1945

There were nine B & W boilers all with a capacity of 130,000 kg. of steam per hour. These were installed between 1937 and 1945.

9. On 20 Sept 1945, Soviet troops started dismantling and removing all equipment in the power house except the cooling towers. In 40 days all of the equipment had been removed and boxed on 30 ton capacity railroad cars for transport to the USSR.

10. I-HSIEN (41°31'N - 121°15'E) - had only a substation.

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11. PEI -P'IAO (41°48'N - 120°44'E)

The Pei-P'iao steam power plant was located about two kilometers southwest of the Railroad depot and about 100 meters northwest of the railroad line. Two 15,000 Kw turbine generators were installed, the first about 1937 and the second about 1939. In 1945, when Nationalists were about to retake Pei-P'iao, the Communist troops dynamited the power house.

12. CHIN-CHOU (41°07'N - 121°06'E) - had only a substation.13. SHEN-YANG (41°48'N - 123°27'E)

The Shen Yang steam power plant was located about six kilometers east of the railroad station, and about 200 meters north of the main river. It was planned that its power plant was to include; - -

Numbers	Turbine Generator	Manufacturer
1	53,000 Kw.	Siemens
2	53,000 Kw.	"
3	53,000 Kw	Mitsubishi
4	53,000 Kw	"
5	53,000 Kw	Yanikawajima
6	53,000 Kw	"

and 12 - 140,00 kg. of steam per hour boilers. Turbine generators #1 and #2 had not been delivered in Oct 1945. Numbers 3, 4, 5, and 6, had been delivered but the installation was incomplete. Soviet soldiers removed units three, through six, and the 12 boilers. The Hunko substation was located about four kilometers up-river from the power plant

14. FU-SHUN (41°52'N - 123°53'E)

The Fu-Shun steam power plant was located on the east of the railroad about three kilometers south of the railroad depot. In Sept 1945, the units installed were - -

Numbers	Turbine Generator	Year of Installation
1	10,000 KW	1921
2	12,500 "	1921
3	12,500 "	1921
4	25,000 "	1929
5	25,000 "	1929
6	50,000 "	1933
7	50,000 "	1935
8	50,000 "	1937
9	50,000 "	1940

Numbers 4 through 9 were of Mitsubishi or Siemens manufacture and were removed by the USSR in late 1945.

15. CH'ANG-CHUN (43°52'N - 125°21'E)

The Ch'ang-Chun steam power plant was located next to the railroad depot. Turbine generators installed here were - -

No.1	5000 KW	Jungstrong (Sweden)	1920
2	7500 KW	"	1920
3	14000 KW	Mitsubishi	1938
4	15000 KW	Hitachi	1940
5	15000 KW		1942

16. The Ch'ang-Chun substation was located about 10 kilometers south and one kilometer east of the railroad depot.

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17. HA-ERH-PIN (45°45'N - 126°39'E)

The steam power plant was located on Machako Street about three kilometers south of the railroad depot. Turbine generators installed here were - -

No.	Turbine Generator	Manufacturer	Year Installed
1	3000 KW	Siemens	1920
2	5000 KW	"	1920
3	7500 KW	"	1920
4	7500 KW	"	1930
5	14000 KW	Mitsubishi	1935
6	14000 KW	"	1940

18. CHI-LIN (43°51'N - 126°33'E)

The Shau-hunnan hydroelectric power plant was located on the Sungari River about 15 kilometers below Chi-Lin. Enclosure C is a sketch of this dam installation. The generators were as follows: - -

No.	Generator	Year	Cycle
1	100,000 KW	1940	50 Cycle
2	100,000 KW	"	"
3	100,000 KW	"	"
4	100,000 KW	"	"
5	100,000 KW	Under construction - 50 cycle	

Units two through five were removed by the USSR in the fall of 1945. Unit one, in good condition in 1945, remained.

19. CH'ING-PO HU (43°30'N - 128°53'E)

Ch'ing-Po Hu had a hydroelectric power plant of 30,000 kw, installed about 1938. I never visited this unit.

20. MU-LING (44°31'N - 130°14'E)

Mu-Ling had a steam power plant with two 15,000 kw Mitsubishi units installed about 1939.

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21. AN-TUNG (40°8'N - 124°24'E)

The An-Tung power station was located on the north edge of the Yalu River about 200 meters south of the railroad bridge. The station had two 3000 kw turbine generators installed about 1937 and two 5000 kw turbine generators installed about 1942. In mid-1945, the generators were in good condition.

22. Other power plants in Manchuria which were not connected with the system of Enclosure A were: - -

City	Turbine Generators	Manufacturer	Year
Pei-Feng (42°55'N-125°09'E)	3 x 15,000 KW	Mitsubishi	1938
Ch'i-Chi-Ha-Erb (47°22'N-123°57'E)	3 x 3,000 KW 2 x 5,000 KW	Yshikawajima "	1938 1940
Ch'eng-Te (30°58'N-117°53'E)	4 x 800 KW (Diesel) 4 x 2500 " "		1925 1937
Chin Hsi (40°54'N-120°36'E)	1 x 15,000 KW	?	?

There were some 40 or 50 additional local power stations of less than 10,000 kw. These were strung out roughly 200 kilometers below the Siberian border.

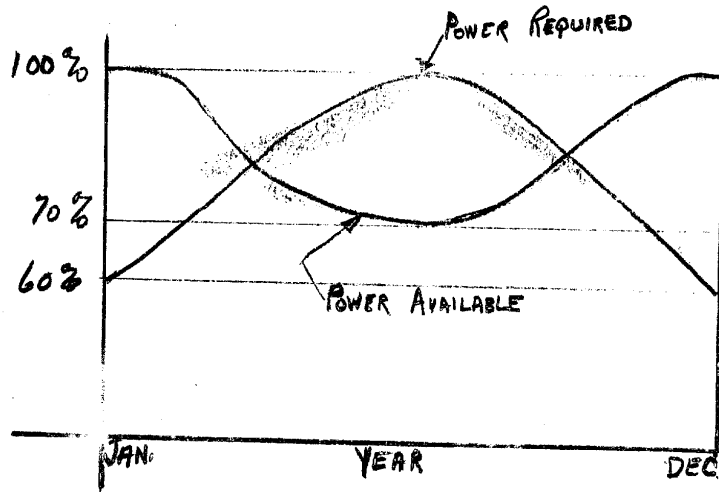
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23. The curves below illustrate the Manchurian power situation in the period 1943 - 1944.



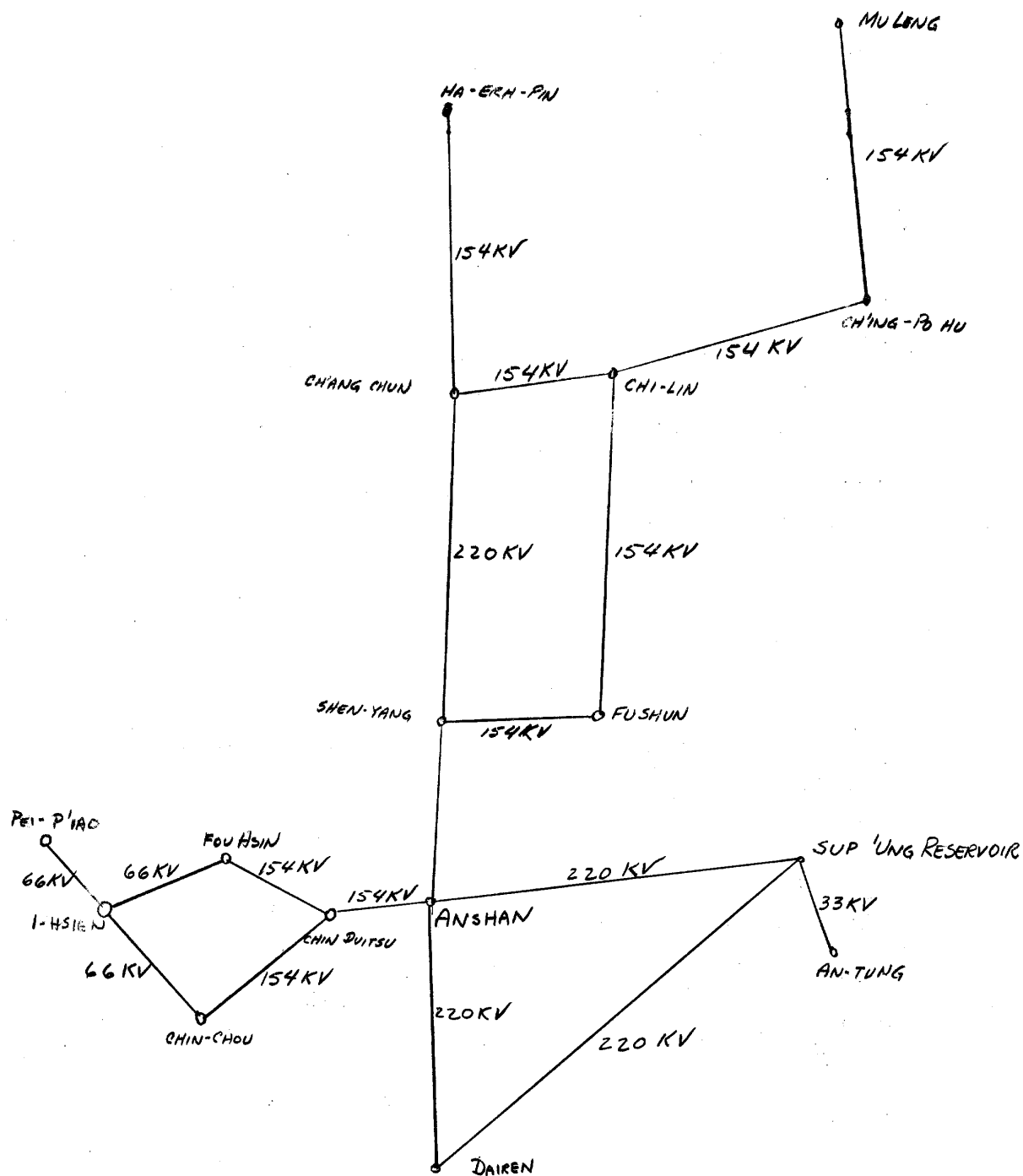
For hydroelectric power plants, 100% power was available from mid-May until late September. For steam power plants, 80% of the rated capacity was considered an economical loading.

24. The Hun Ho River, running through Fu-Shun and Shen Yang was estimated to be capable of providing 2,500,000 kw of power. No dams had been constructed along this river until after, at least, 1945.
25. In Jan 1954, [redacted] in 1953 a maximum boiler pressure used in Manchurian power plants was 100 kg per square centimeter as compared with 38 kg per square centimeter used up to 1945. Undoubtedly the USSR has installed modern boilers.

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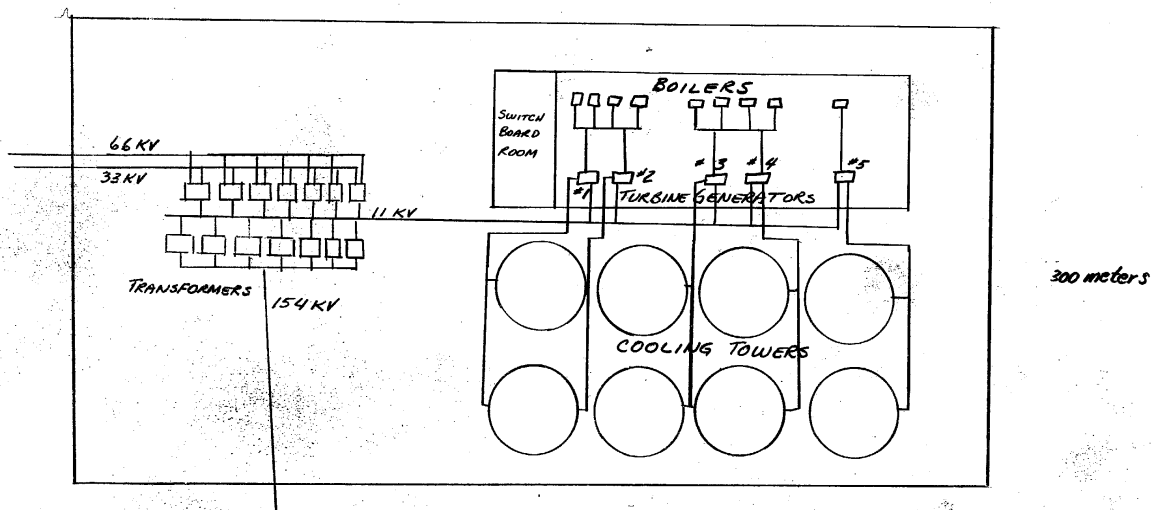


MANCHURIAN POWER TRANSMISSION LINES

ENCL A

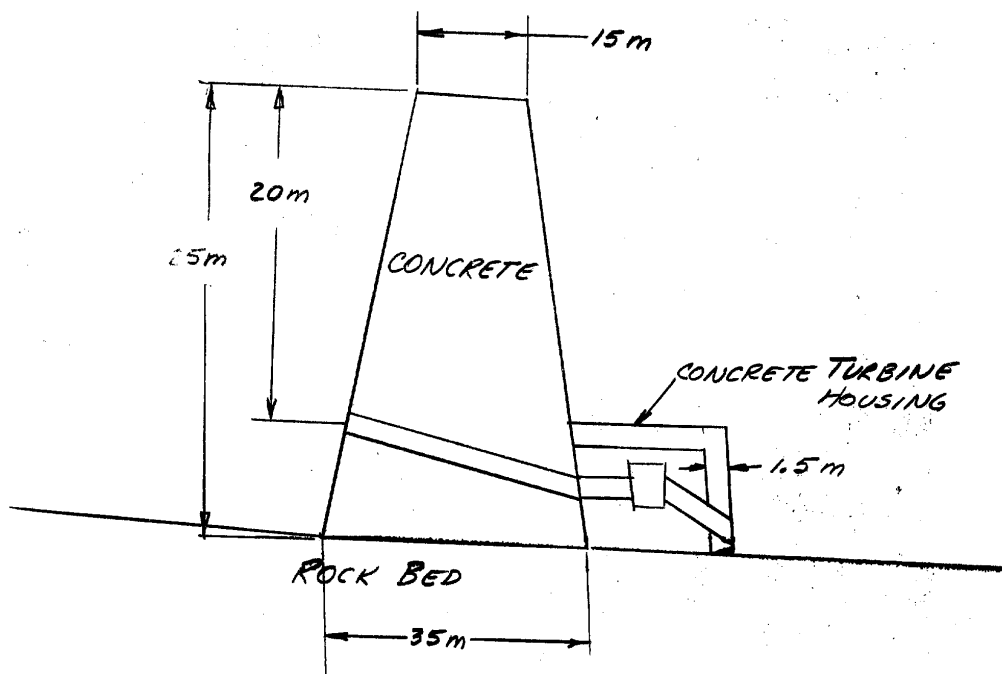
700 meters

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SCHEMATIC DRAWING
OF FOU HSIN POWER PLANT

ENCL 5



THE DAM EXTENDS ABOUT 100 meters
ACROSS THE SUNGARI RIVER.

SHAU-HUNMAN POWER PLANT DAM
NEAR CHI-LIN

ENCL C